

PCV-W Series

SERVICE MANUAL

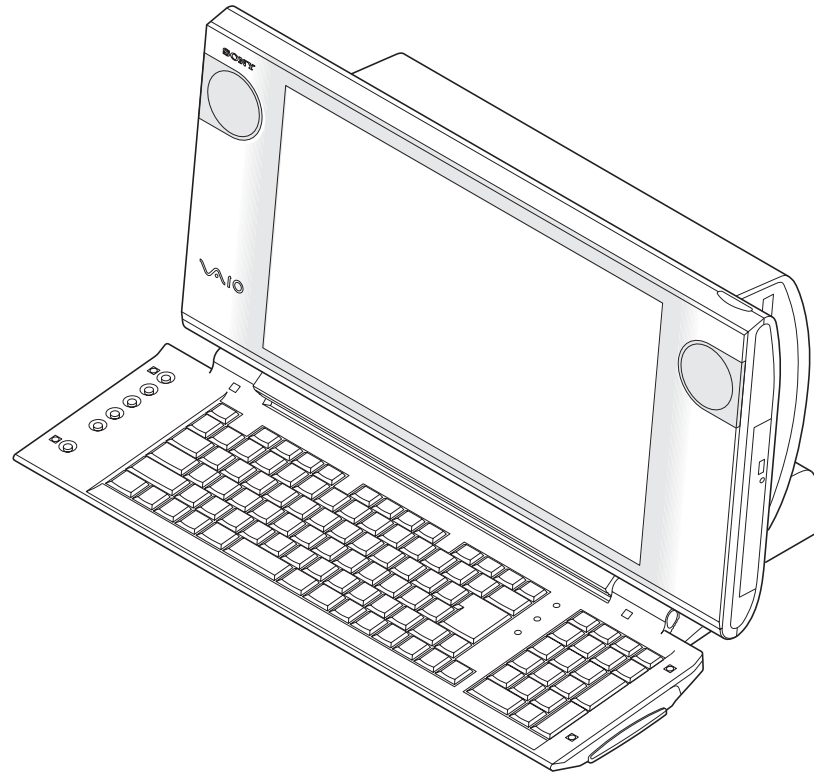
Ver. 3-2003F

Revision History

Lineup: PCV-W10

△ PCV-W20

△ PCV-W30



For American Area

US Model

Canadian Model



PERSONAL COMPUTER VAIO

SONY®

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CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the (Δ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270°C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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PCV-W Series (AM)

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2. FRAME HARNESS

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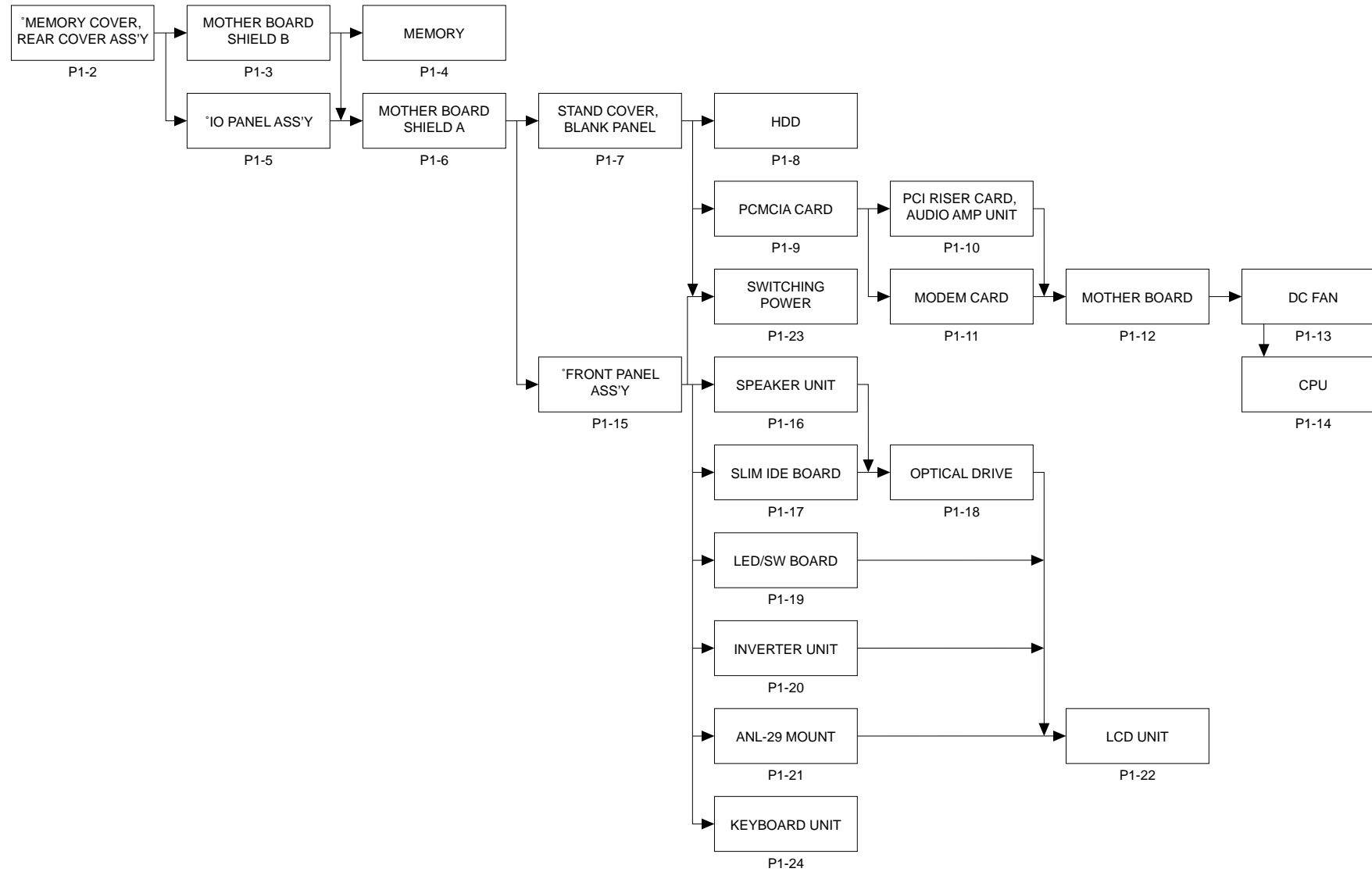
3. REPAIR PARTS LIST

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History of the changes is shown as the "Revision History" at the end of this data.

SECTION 1 DISASSEMBLY

• FLOW CHART

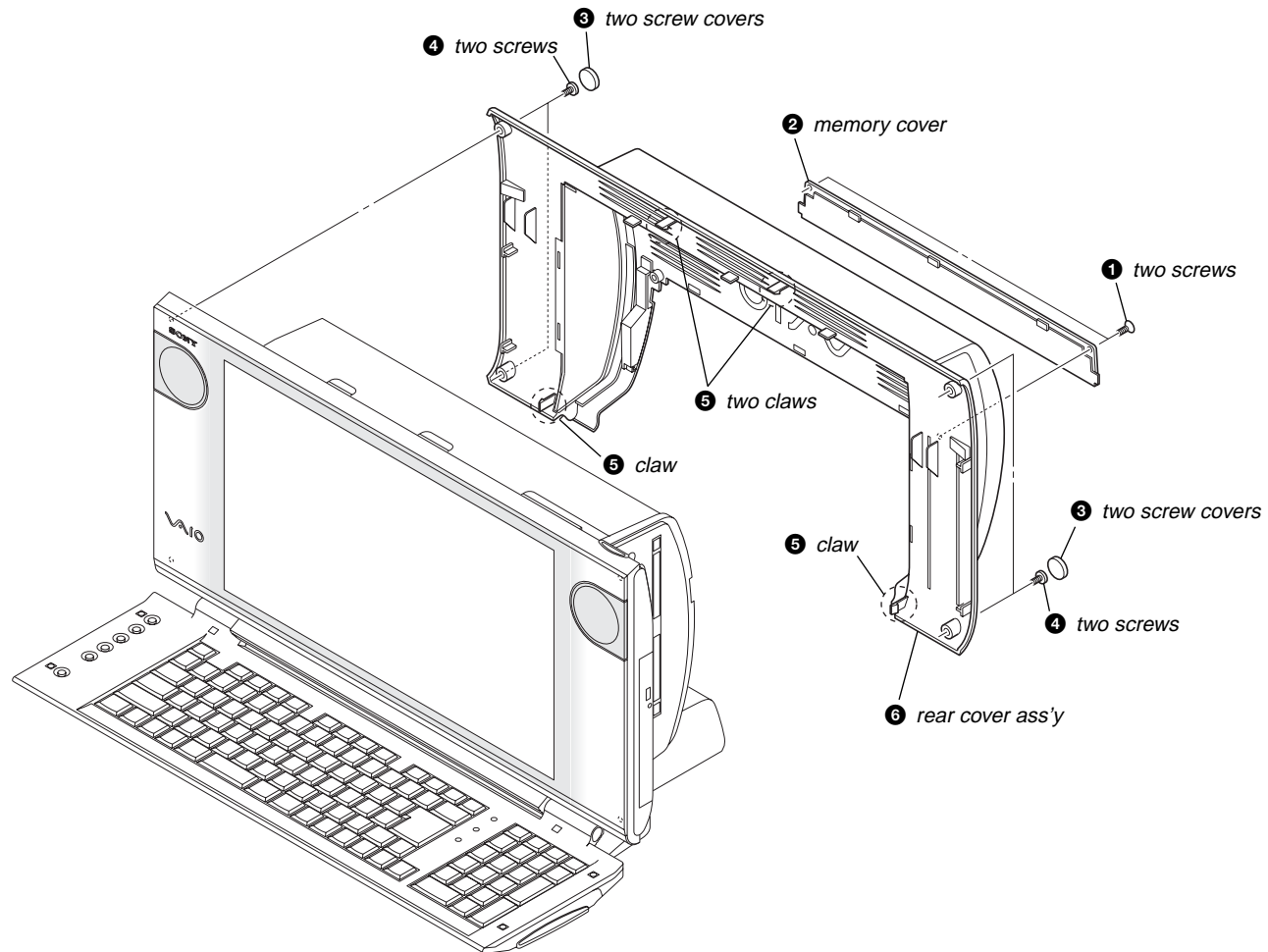


- P□-□ denotes the page concerned.
- HDD has a low resistance to vibration, requiring careful handling.

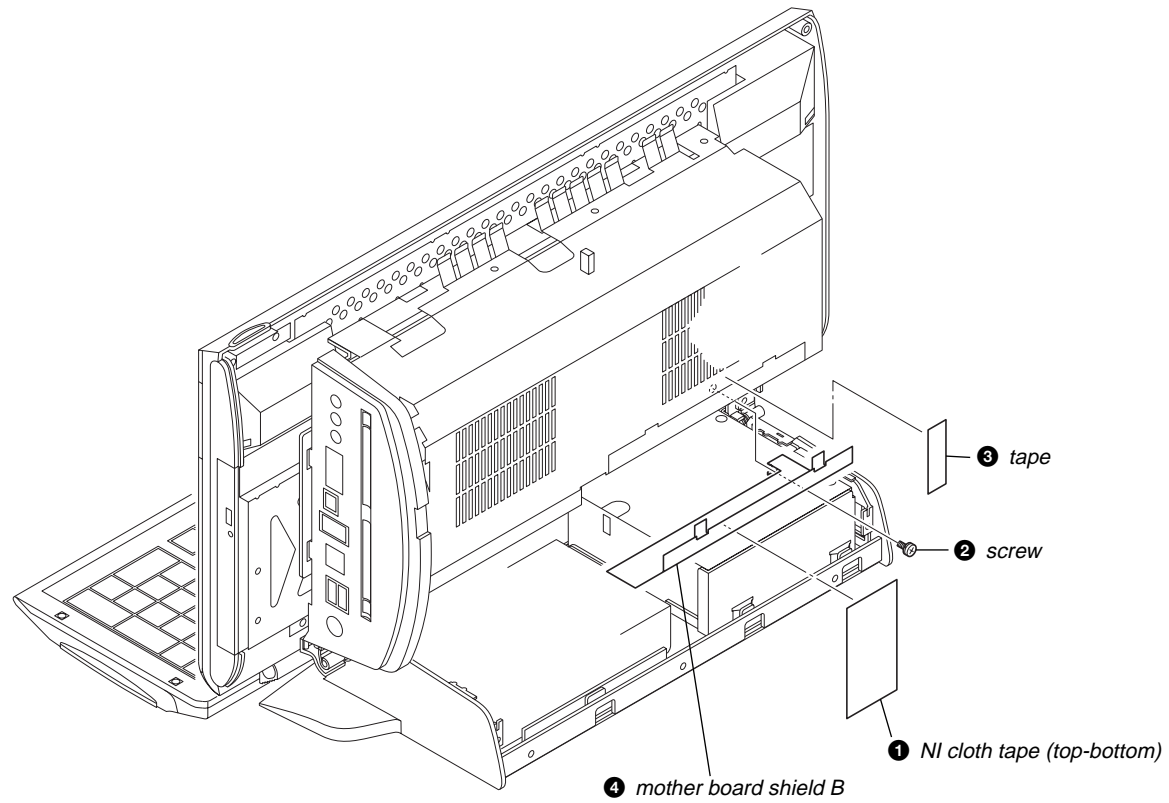
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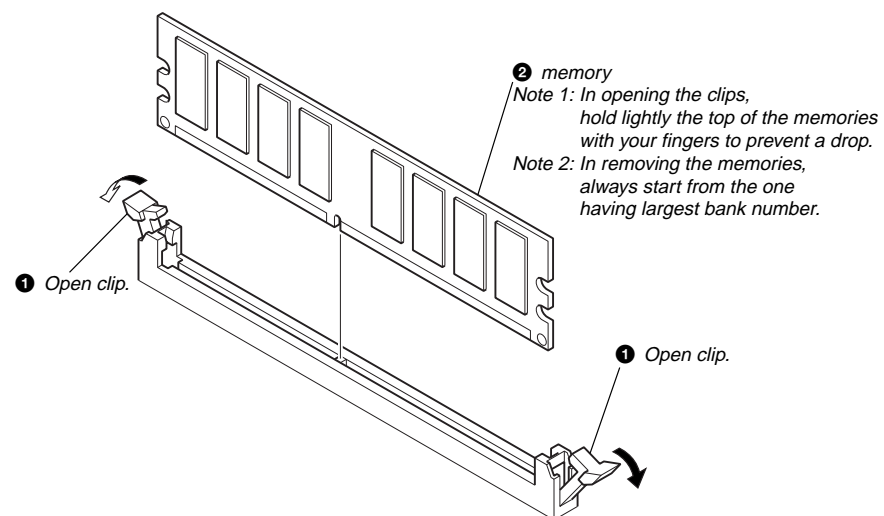
• MEMORY COVER, REAR COVER ASS'Y



- MOTHER BOARD SHIELD B



• MEMORY

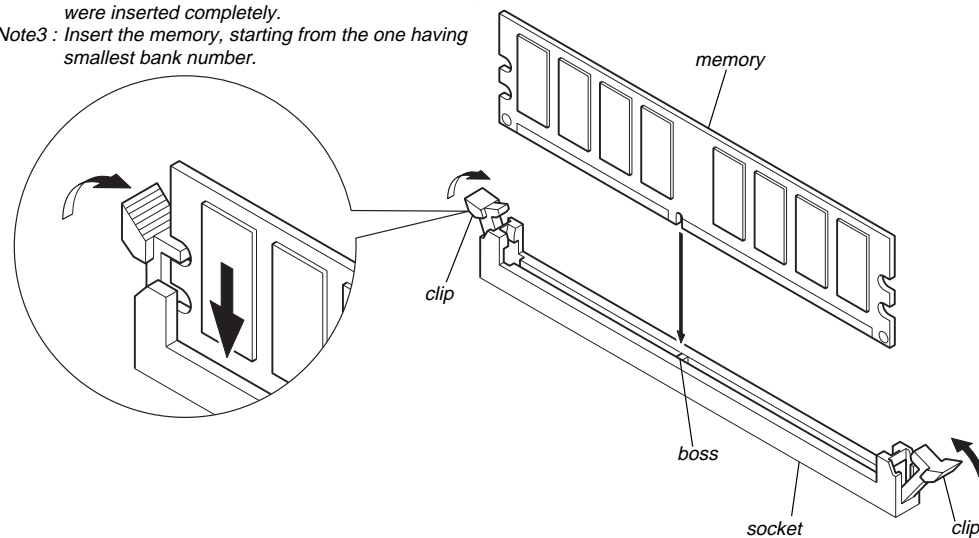


MEMORY INSTALLATION

Note1 : With the clips left open, insert the memory so that boss of socket engage with slot of memory.

Note2 : Make sure that clips are closed when the memory were inserted completely.

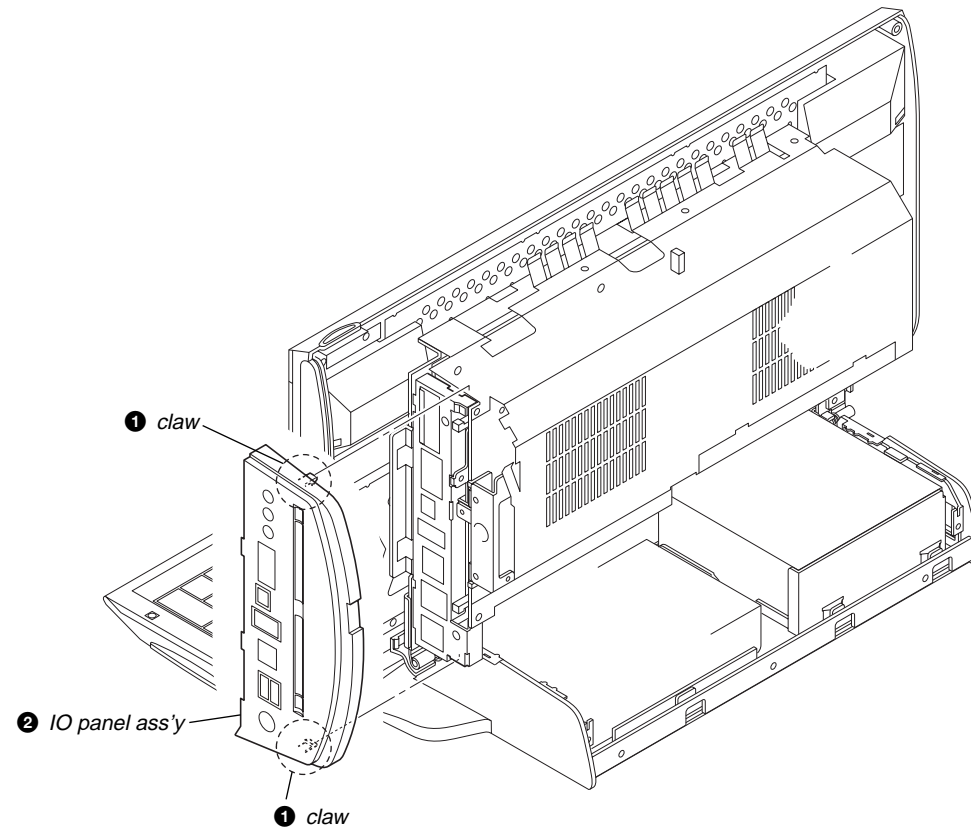
Note3 : Insert the memory, starting from the one having smallest bank number.



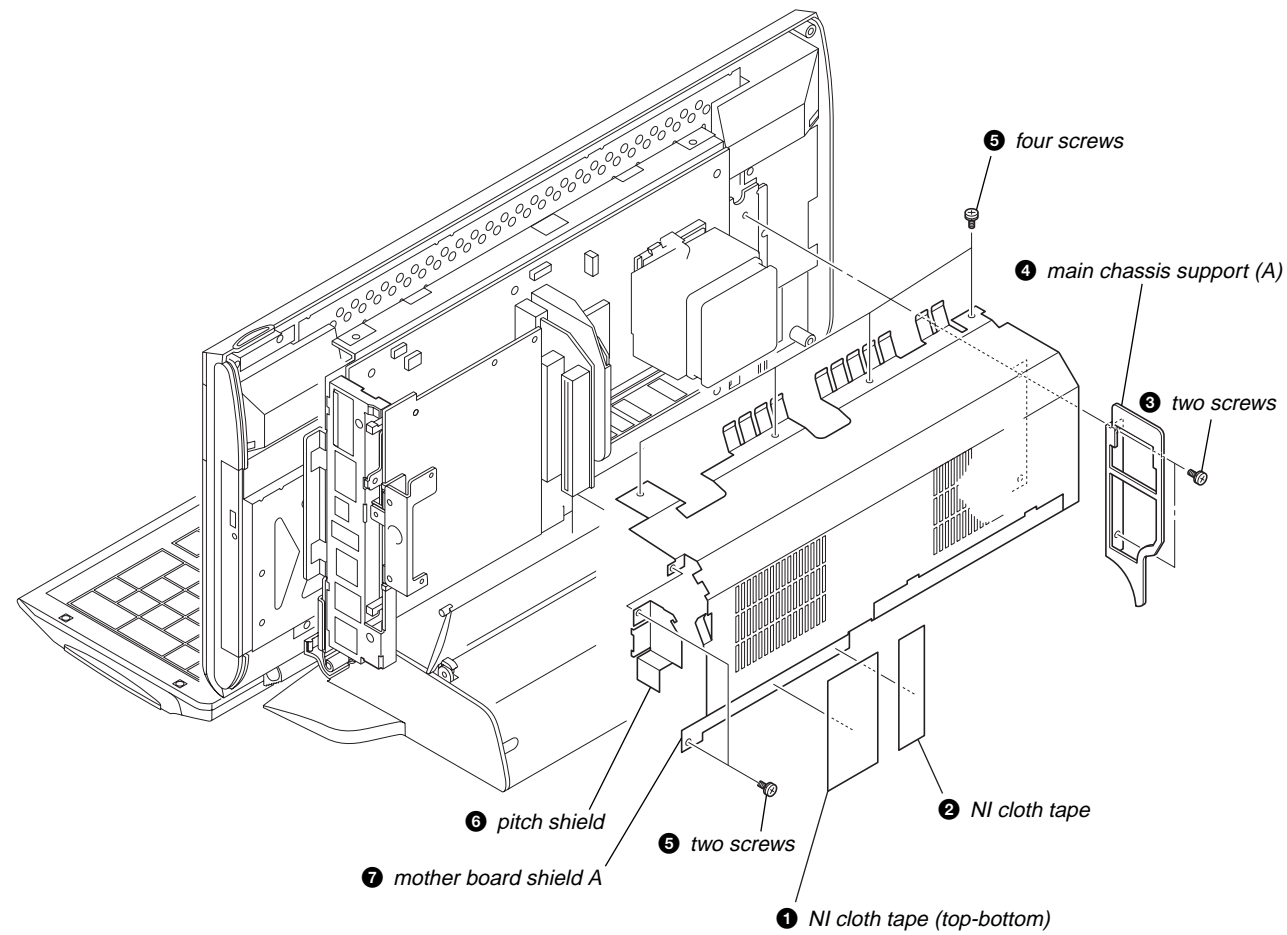
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PCV-W Series (AM)

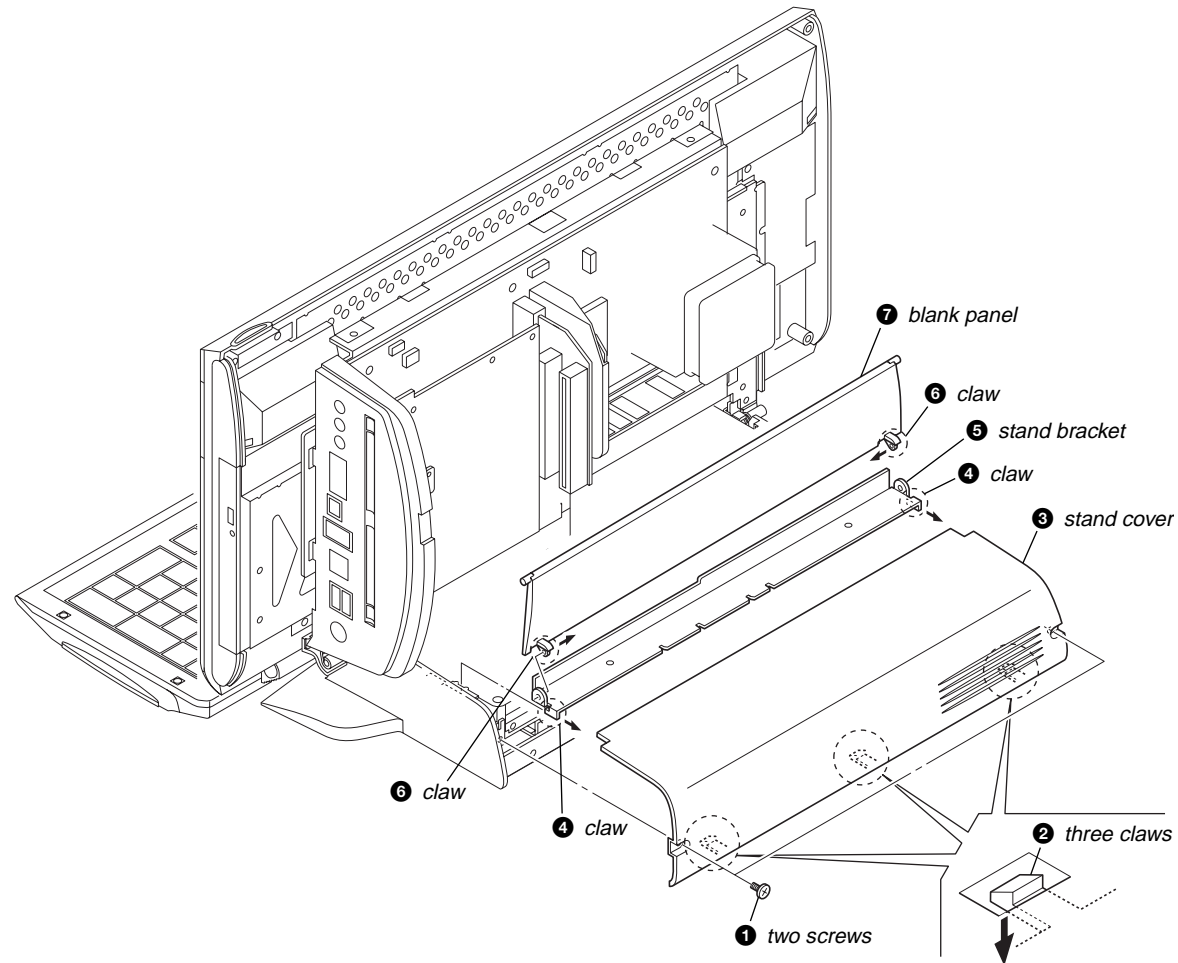
- IO PANEL ASS'Y



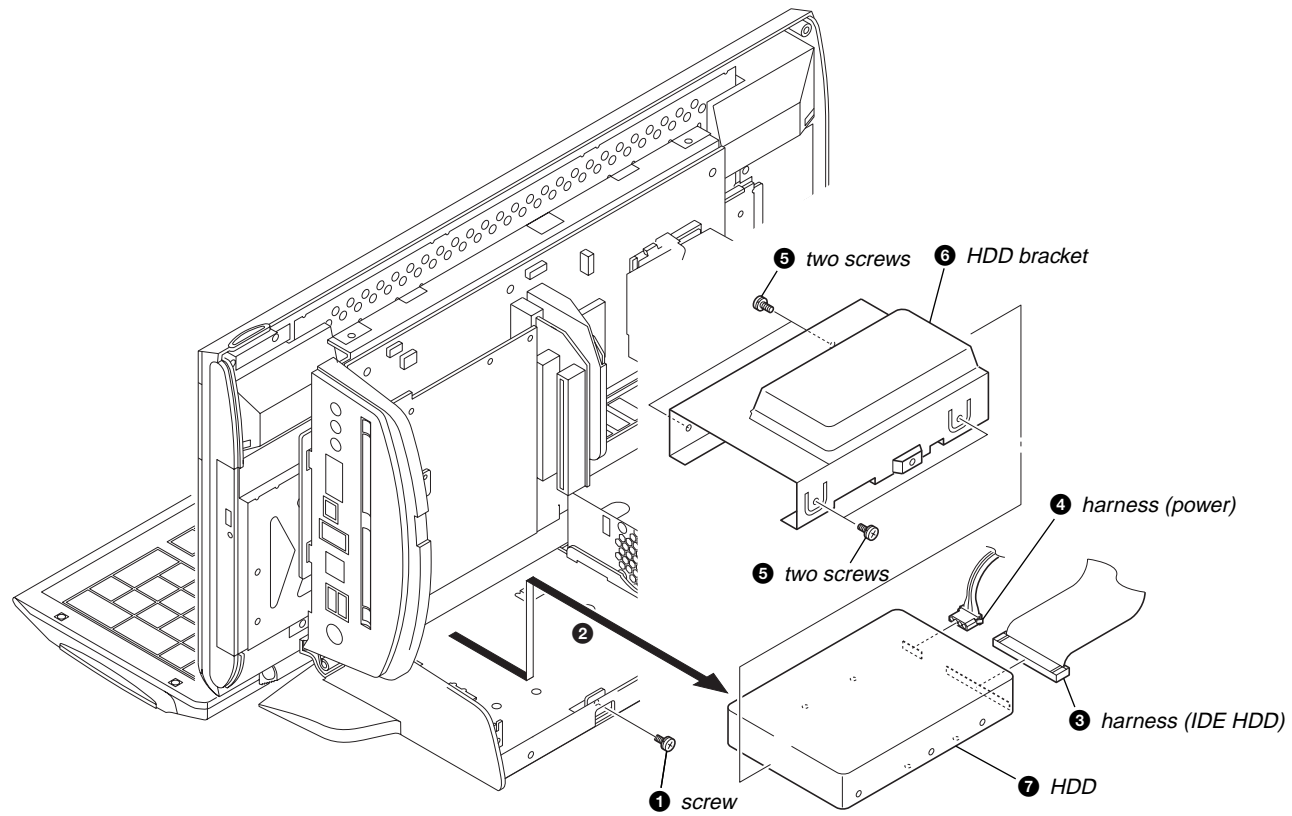
• MOTHER BOARD SHIELD A



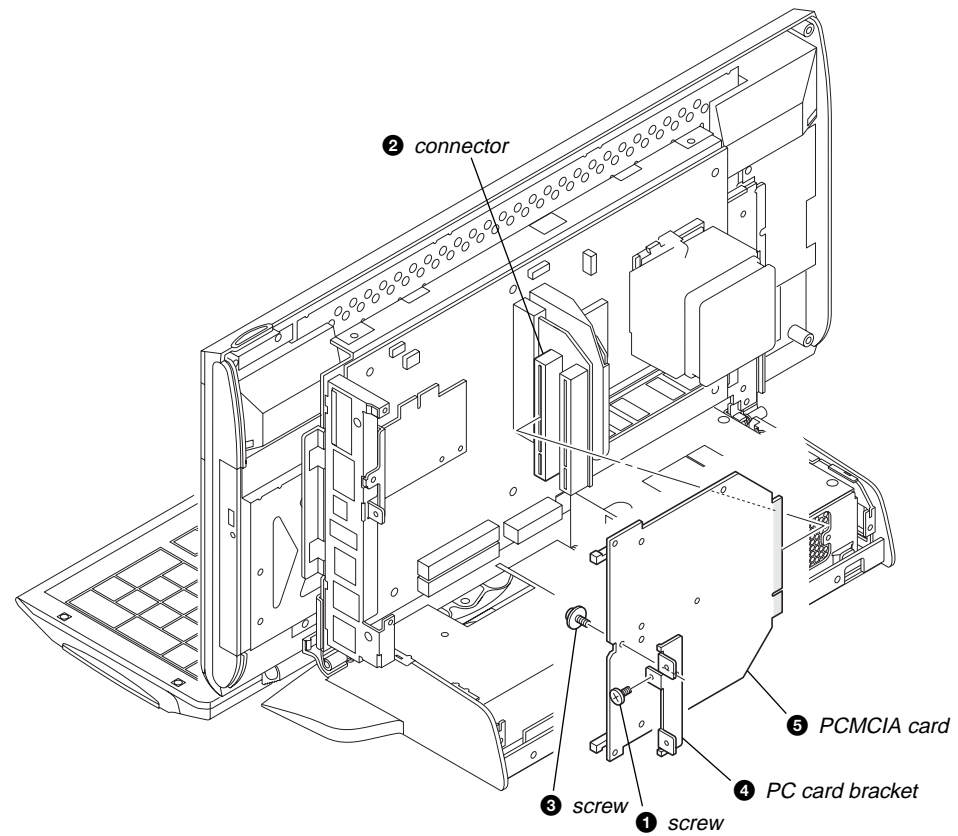
- **STAND COVER, BLANK PANEL**



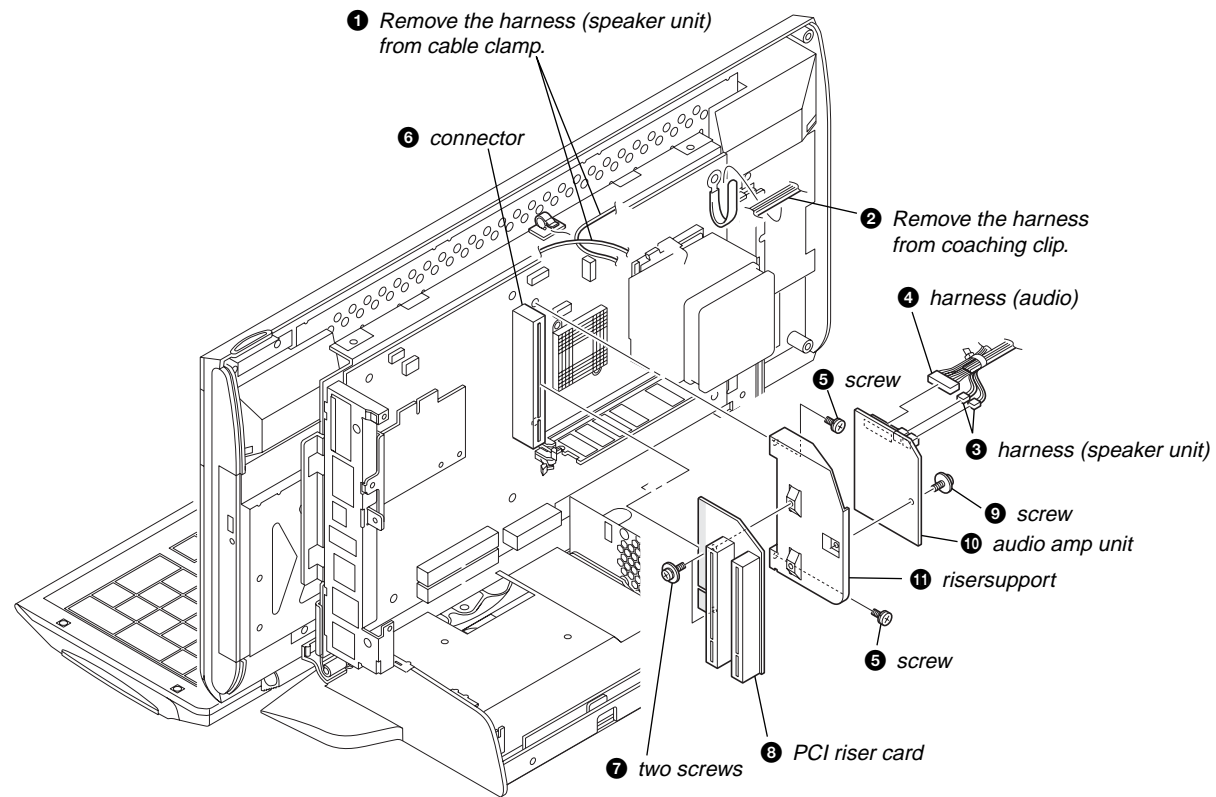
- HDD



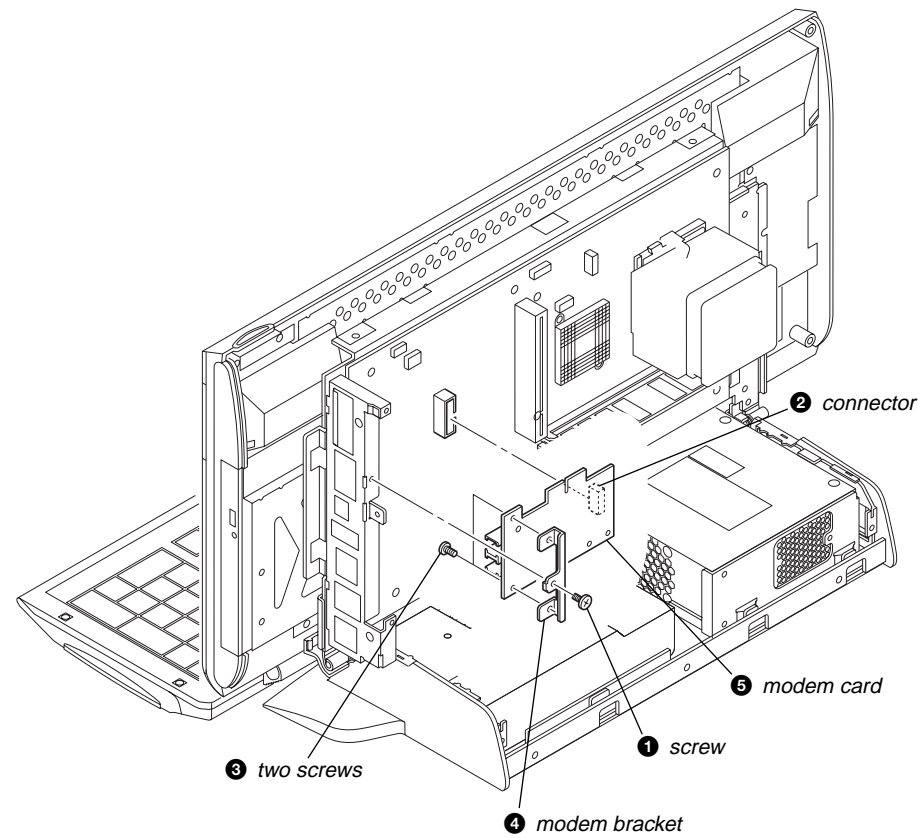
- PCMCIA CARD



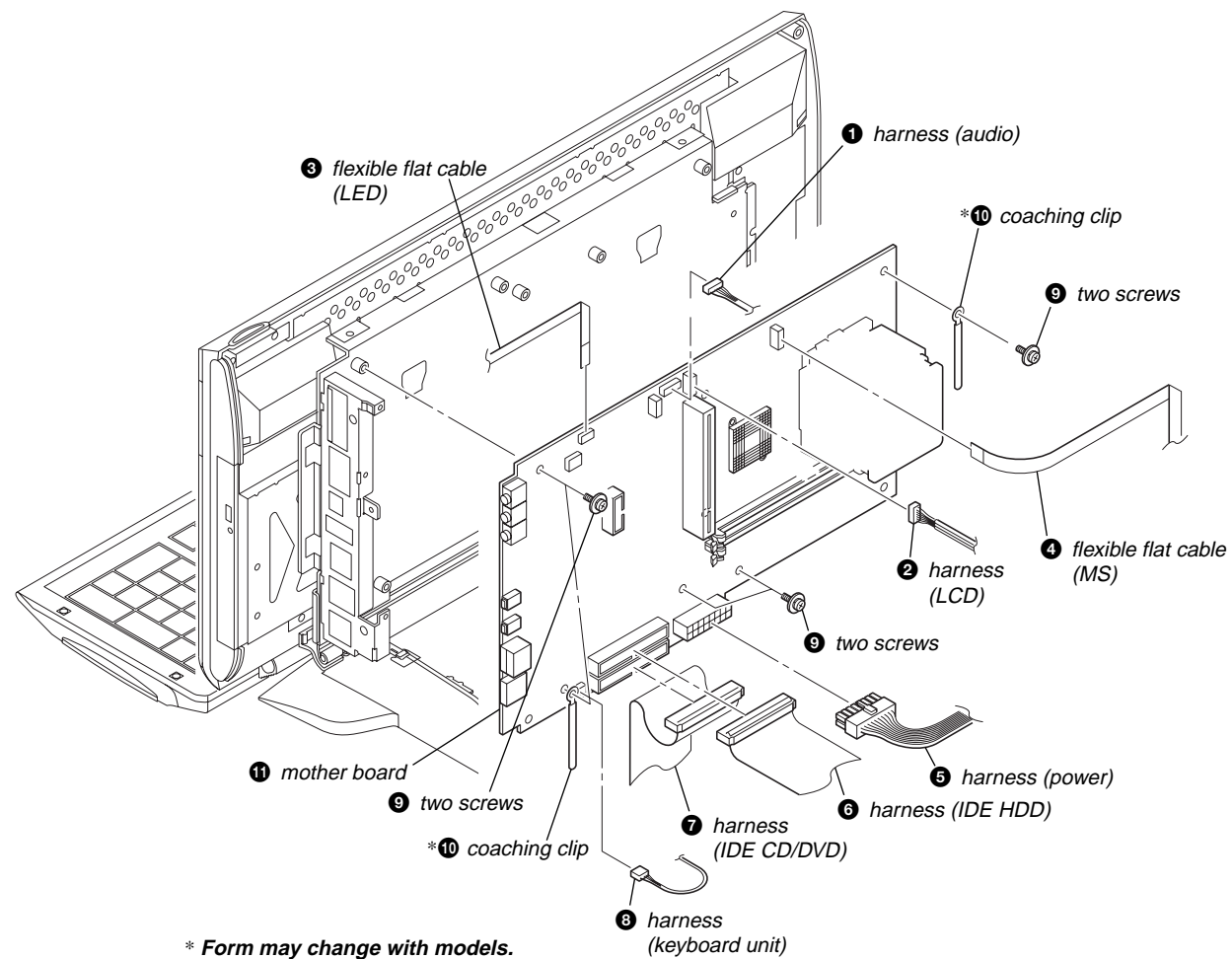
- PCI RISER CARD, AUDIO AMP UNIT



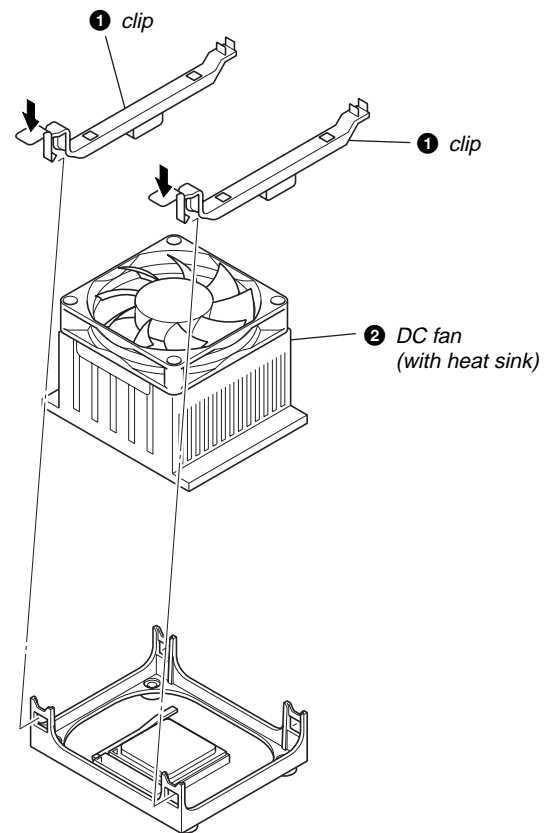
- MODEM CARD



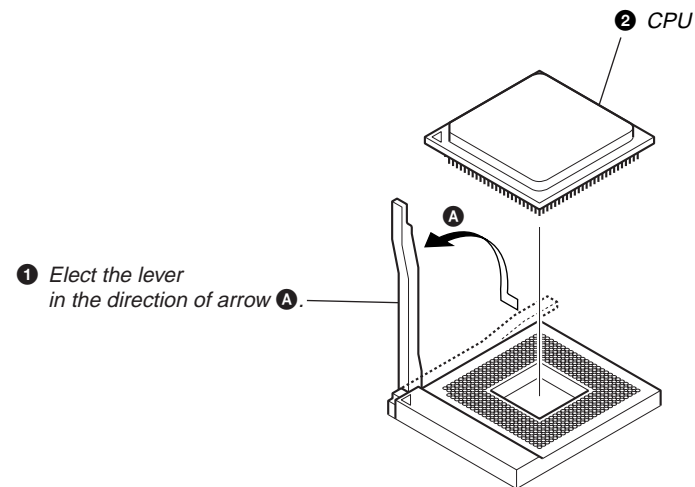
• MOTHER BOARD



- DC FAN



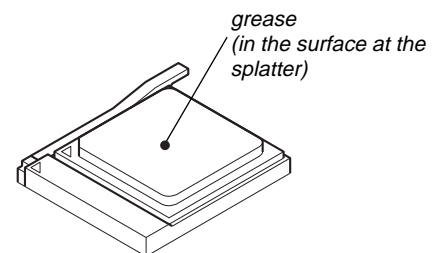
- CPU



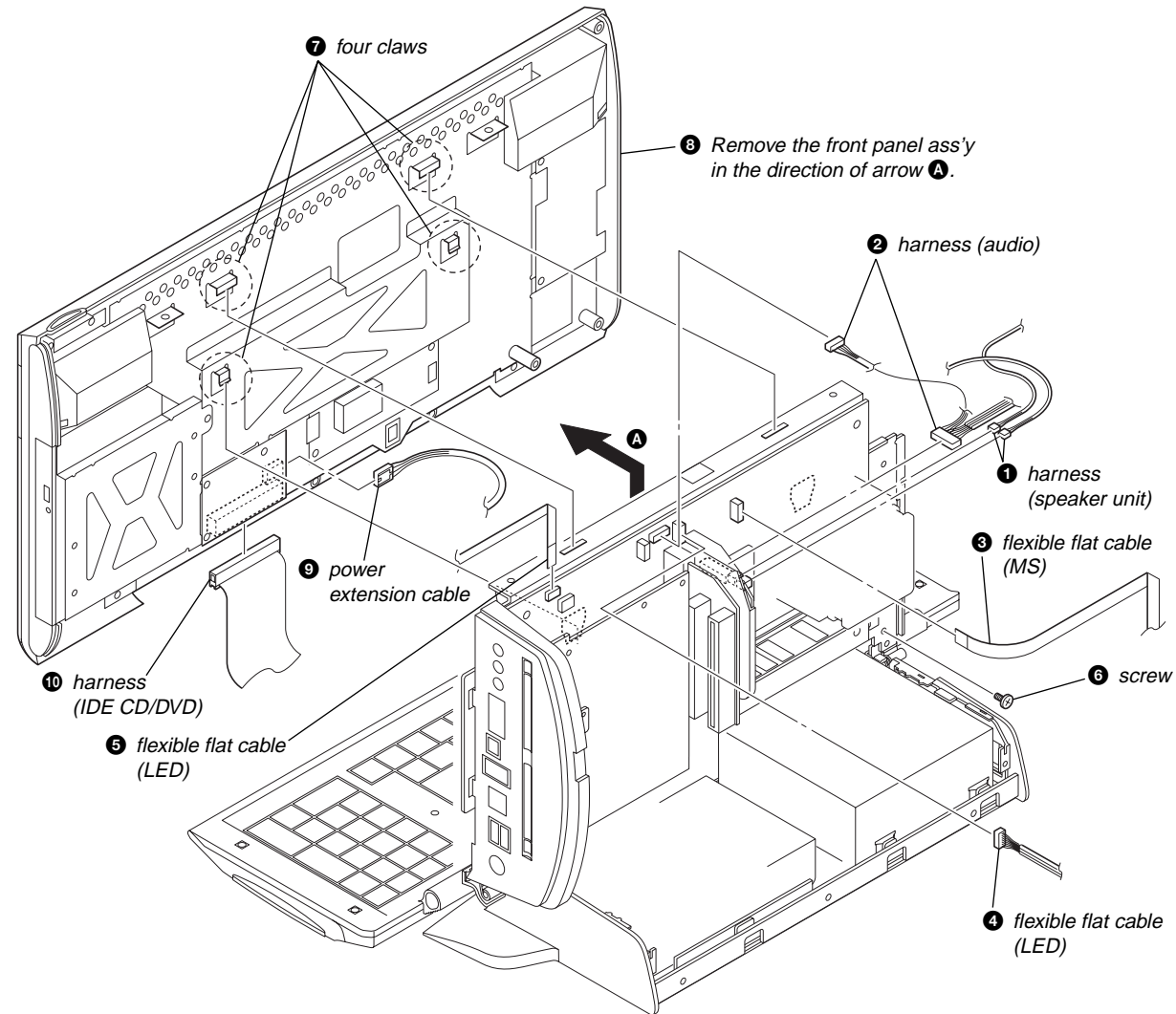
*Note : When heat sink is removed from CPU,
install new ones after thermal diffusion
grease is wiped off and silicon compound
is applied to the place shown in the figure.*

*Thermal diffusion grease : silicon compound (G-765) 90G
Amount to apply : 0.5 g (as the same size as the tip of a match) (Pentium 4)*

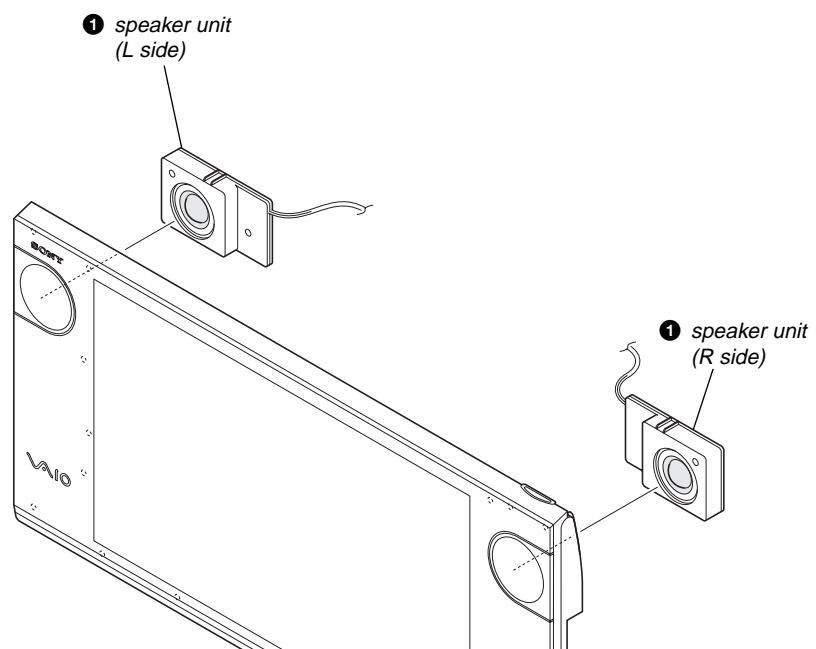
** Take care not to apply the grease
to any other places because it has
high conductivity.*



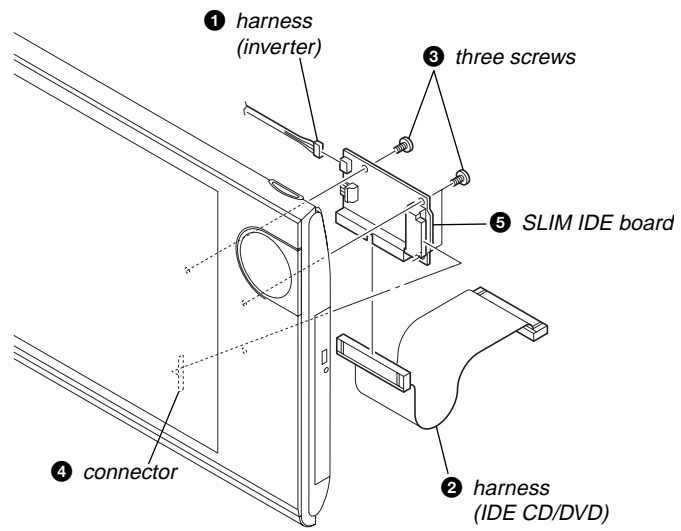
• FRONT PANEL ASS'Y



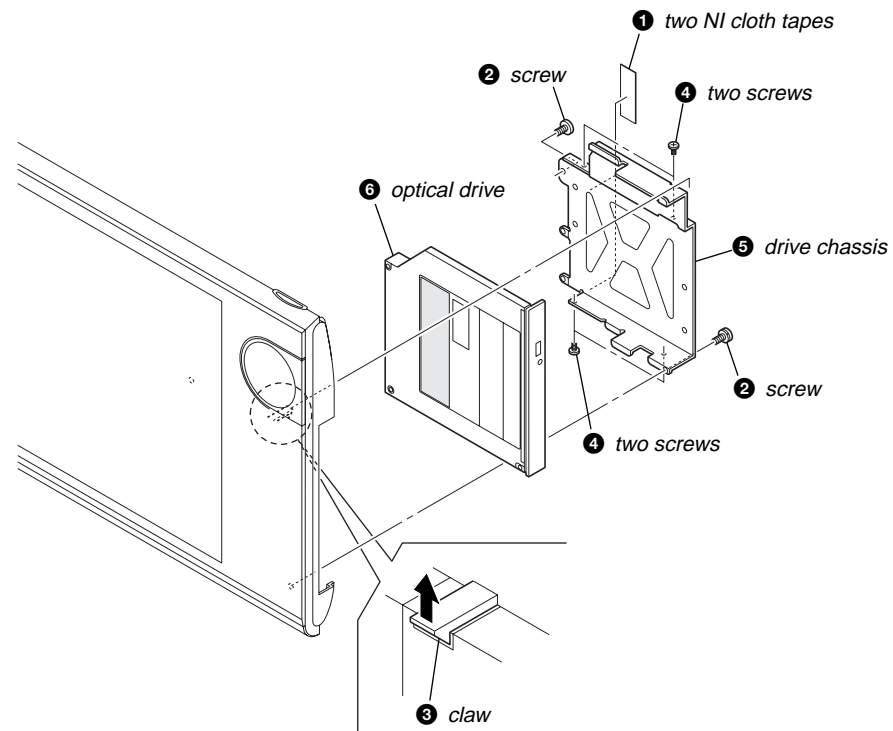
- **SPEAKER UNIT**



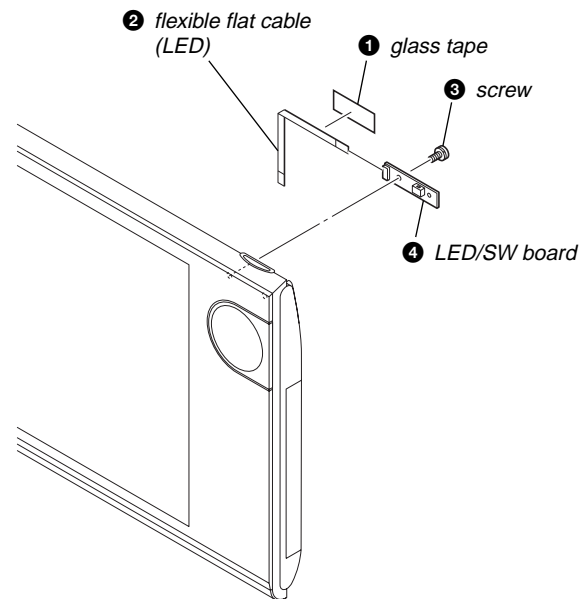
- SLIM IDE BOARD



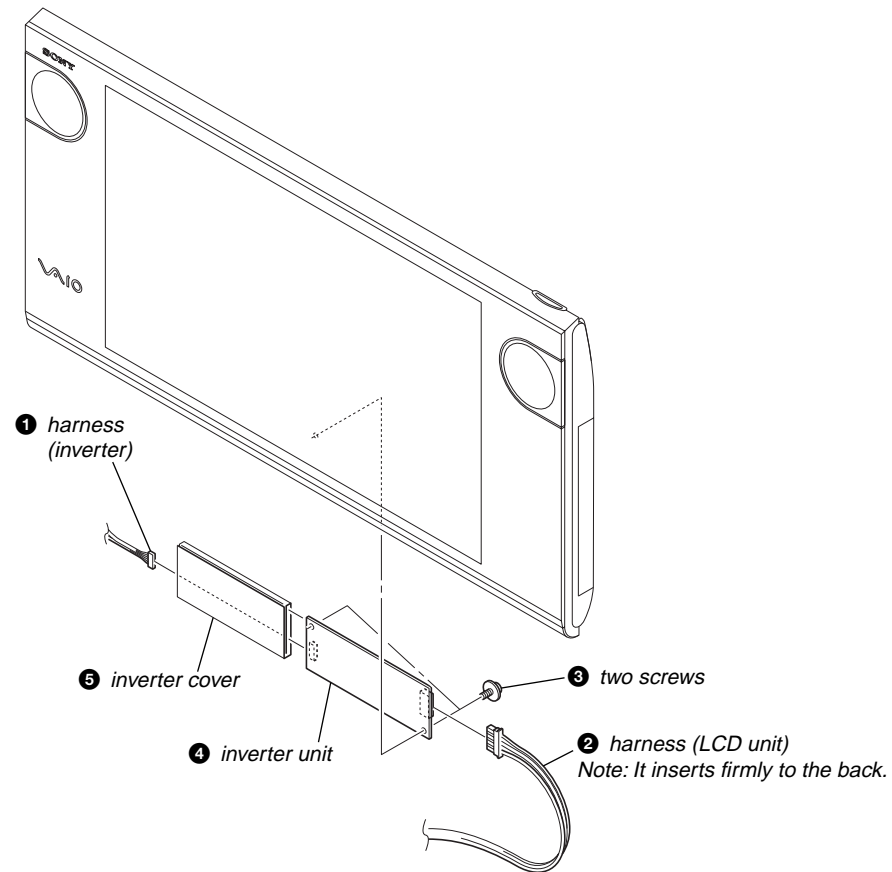
- OPTICAL DRIVE



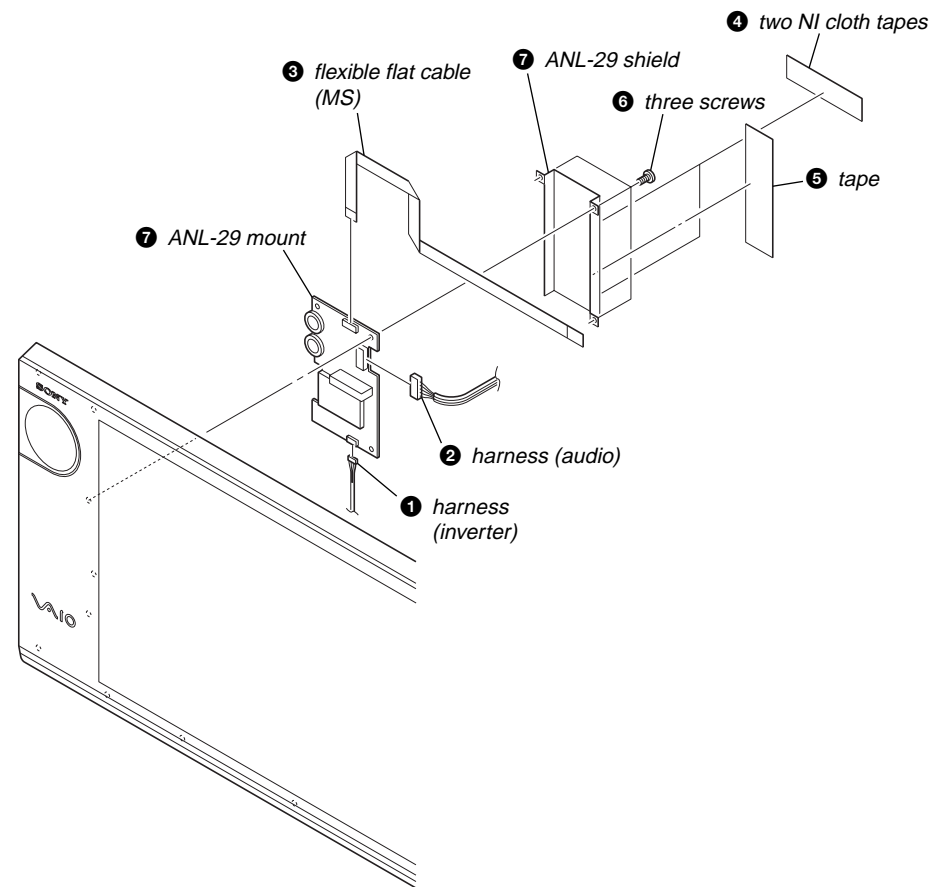
- LED/SW BOARD



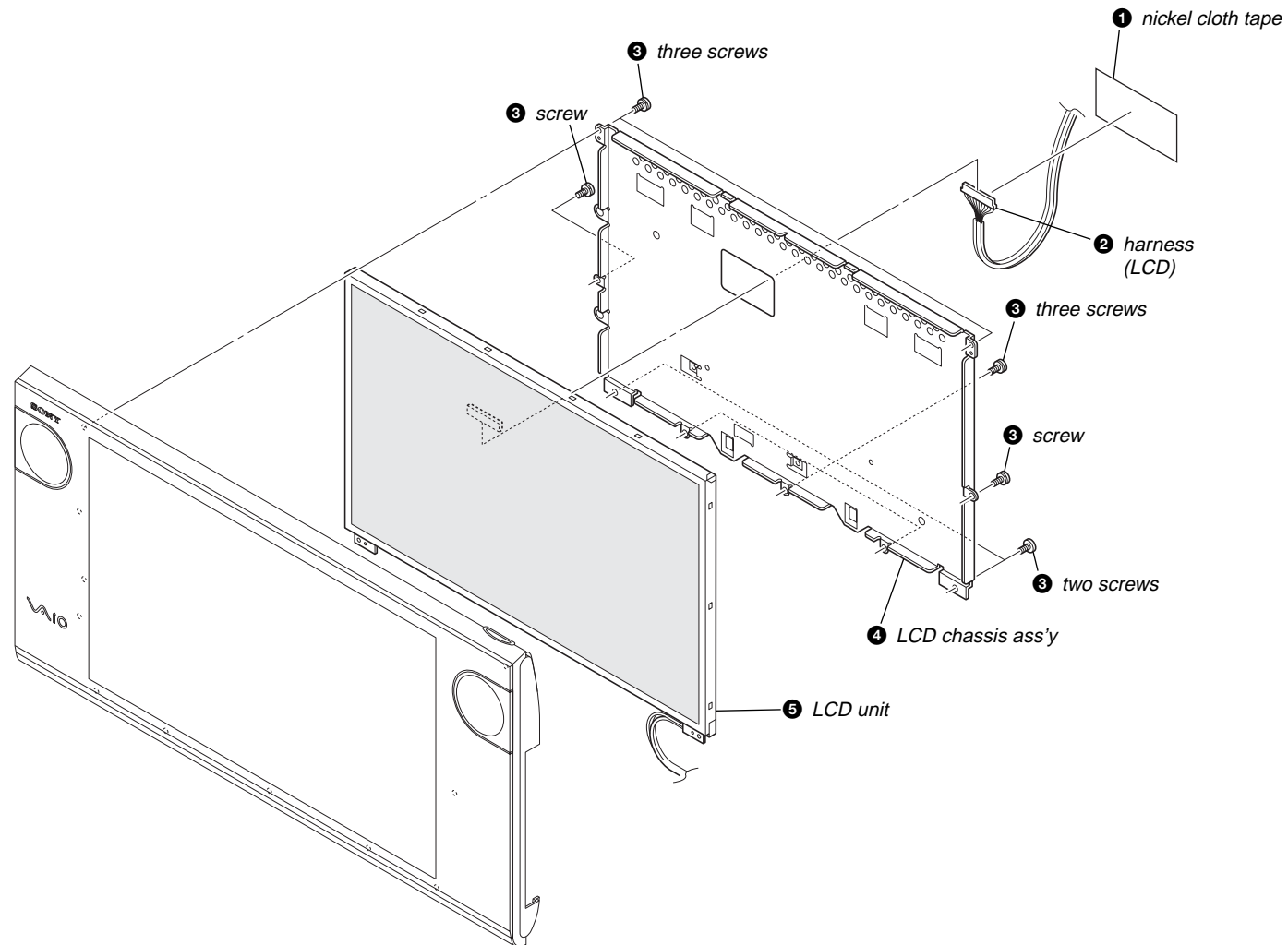
- INVERTER UNIT



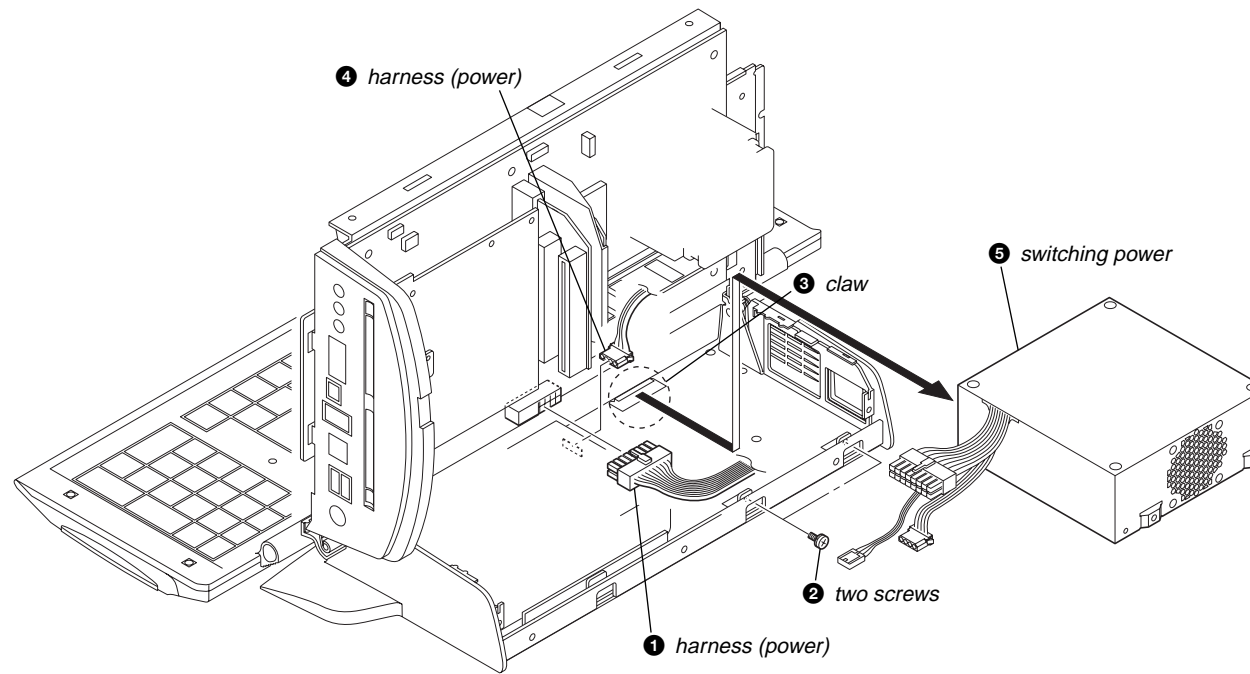
- ANL-29 MOUNT



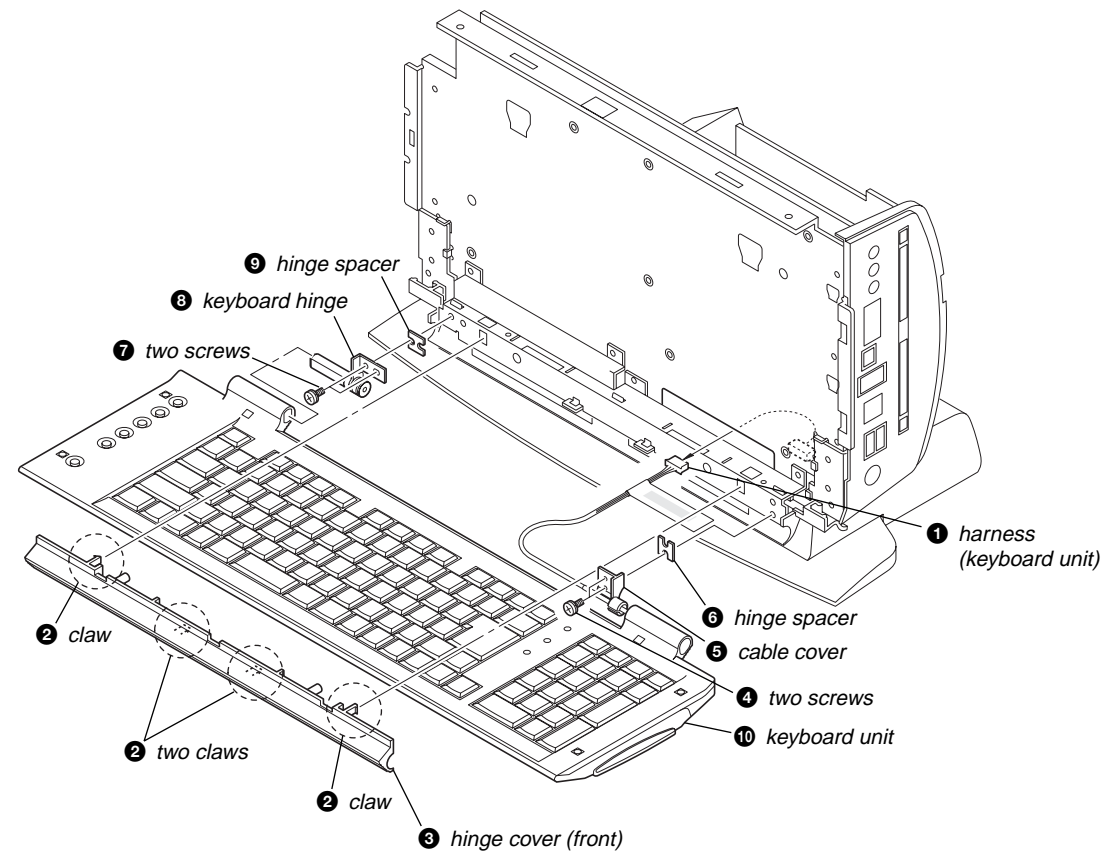
• LCD UNIT



- SWITCHING POWER



• KEYBOARD UNIT



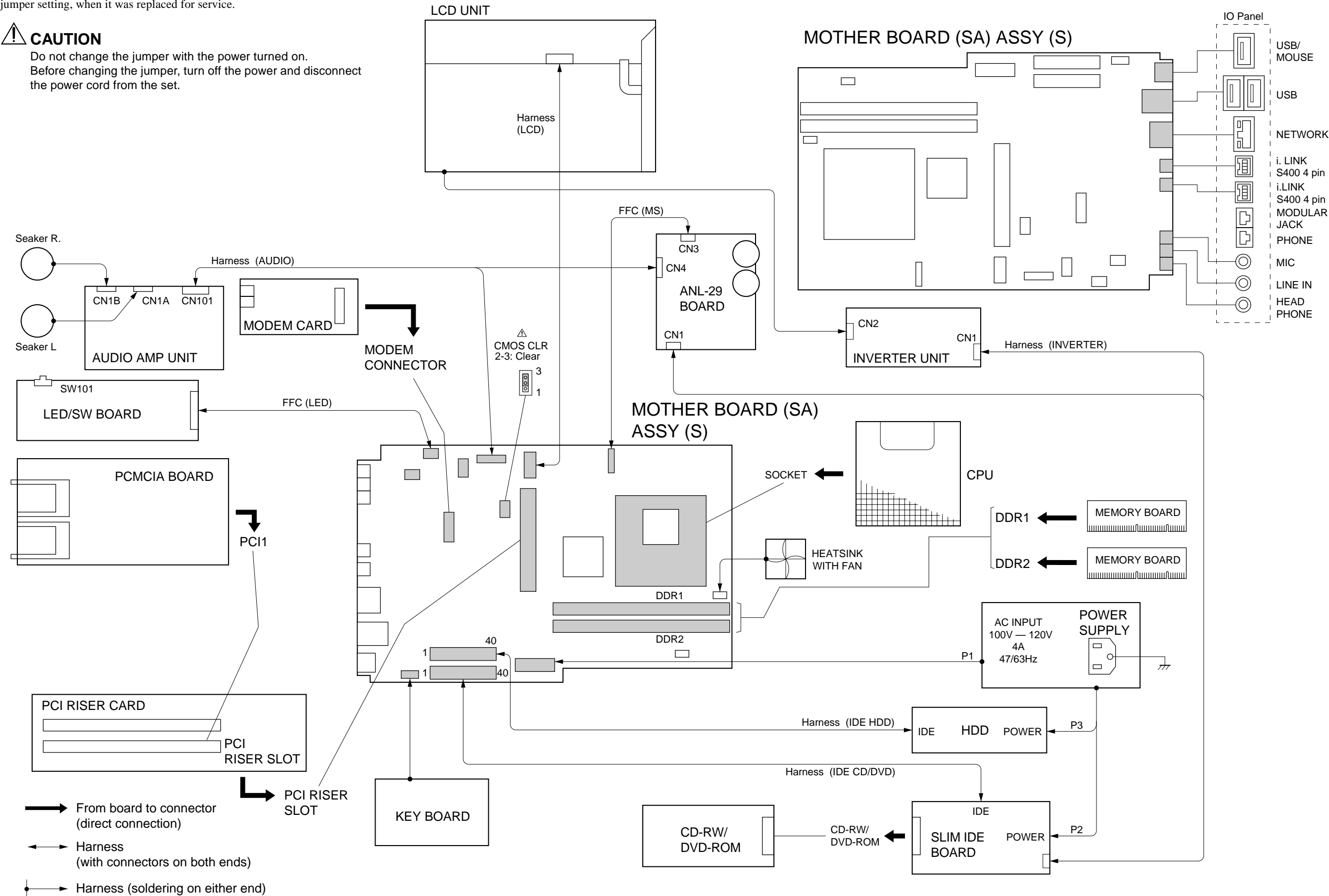
SECTION 2 FRAME HARNESS

• FRAME HARNESS DIAGRAM AND JUMPER SETTING OF MOTHER BOARD

The Mother board of service parts can be used without changing factory jumper setting, when it was replaced for service.

⚠ CAUTION

Do not change the jumper with the power turned on.
Before changing the jumper, turn off the power and disconnect the power cord from the set.



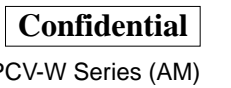
 **CAUTION**

CAUTION
Do not change the jumper with the power turned on.
Before changing the jumper, turn off the power and disconnect the power cord from the set.

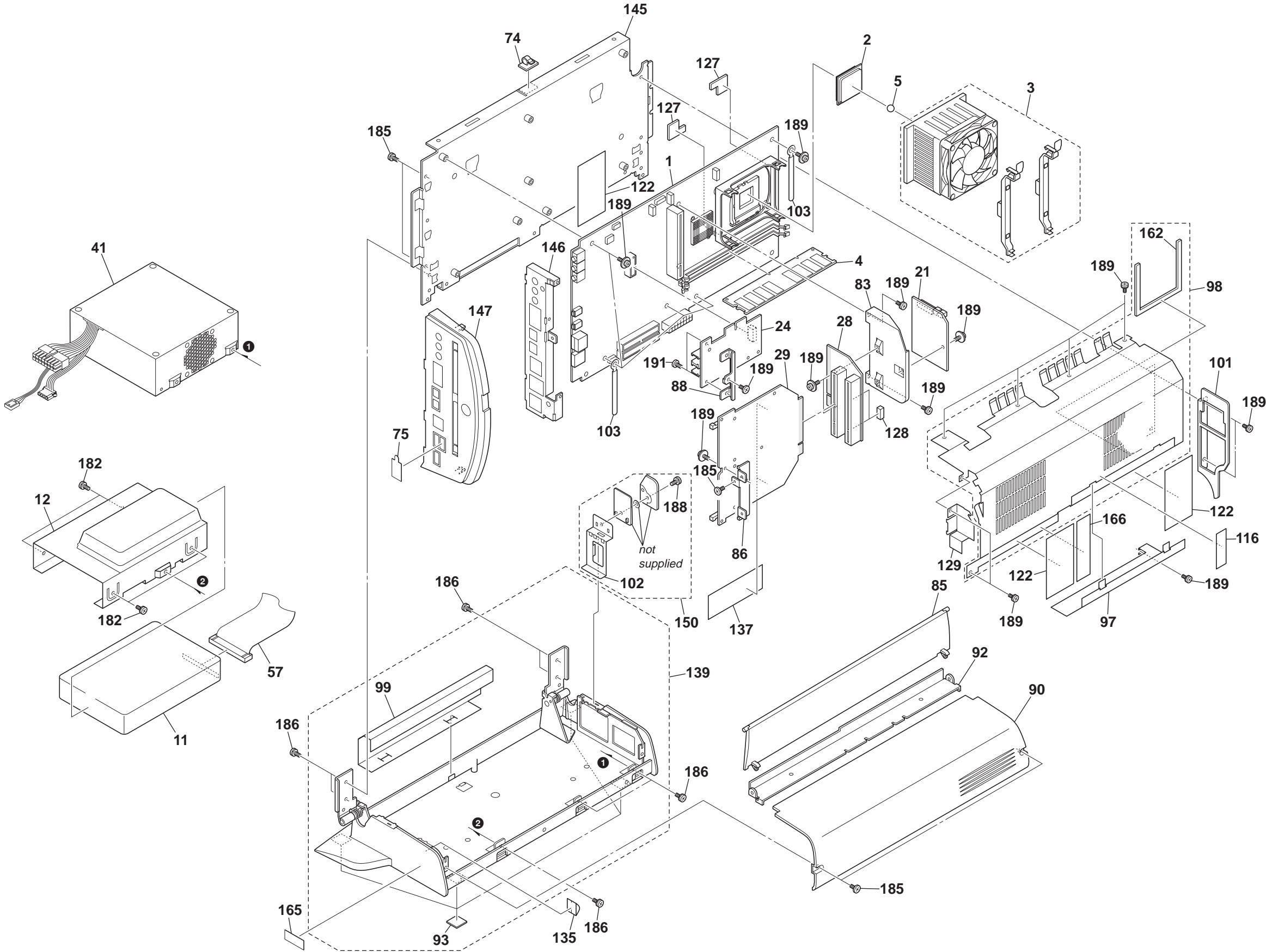
Legend:
 → From board to connector (direct connection)
 ↔ Harness (with connectors on both ends)
 → Harness (soldering on either end)

Components and Connections:
 - **Audio Amp Unit:** Connected to Speaker L and Speaker R via CN1B, CN1A, and CN101. Connected to the Mother Board (EM) Assy (S) via the Harness (AUDIO).
 - **Modem Card:** Connected to the Mother Board (EM) Assy (S) via the Modem Connector.
 - **LED/SW Board:** Connected to the Mother Board (EM) Assy (S) via FFC (LED).
 - **PCMCIA Board:** Connected to the Mother Board (EM) Assy (S) via PCI1.
 - **PCI Riser Card:** Connected to the Mother Board (EM) Assy (S) via the PCI Riser Slot.
 - **Key Board:** Connected to the Mother Board (EM) Assy (S).
 - **Mother Board (EM) Assy (S):** Central component connecting to the ANL-29 Board, Inverter Unit, CPU, Memory Board, Power Supply, IDE HDD, SLIM IDE Board, and CD-RW/DVD-ROM.
 - **ANL-29 Board:** Connected to the Mother Board (EM) Assy (S) via FFC (MS).
 - **Inverter Unit:** Connected to the Mother Board (EM) Assy (S) via the Harness (INVERTER).
 - **CPU:** Connected to the Mother Board (EM) Assy (S) via the Socket.
 - **Memory Board:** Connected to the Mother Board (EM) Assy (S) via DDR1 and DDR2.
 - **Power Supply:** Connected to the Mother Board (EM) Assy (S) via P1.
 - **IDE HDD:** Connected to the Mother Board (EM) Assy (S) via the Harness (IDE HDD) and P3.
 - **SLIM IDE Board:** Connected to the Mother Board (EM) Assy (S) via the Harness (IDE CD/DVD) and P2.
 - **CD-RW/DVD-ROM:** Connected to the SLIM IDE Board.
 - **IO Panel:** Connected to the Mother Board (EM) Assy (S) via the Harness (IO).
 - **Legend:** Defines connection types: direct connection, harness with connectors on both ends, and harness soldering on either end.

3-1. EXPLODED VIEW (FRONT SECTION)



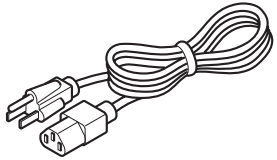
3-2. EXPLODED VIEW (REAR SECTION)



3-3. ACCESSORIES

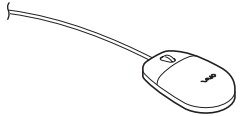
201

AC cord



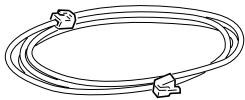
203

mouse



204

telephone cord



205

ferrite core



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3-4. BASIC LIST

The parts in the “Basic List” will be referred to as the part list.
The part order should be taken place based on the part number in the list.

Ref.No.	Part No.	Description	W10	W20	W30
1	A-8112-129-A	MOTHER BOARD (SA) ASSY (S)	●	●	
	A-8115-580-A	MOTHER BOARD (EM) ASSY (S)			●
2	A-8112-336-A	CPU (CEL/1.7G/6K8) ASSY (S)	●		
	A-8114-009-A	CPU (P4/1.8G/62R) ASSY (S)		●	
	A-8115-896-A	CPU (P4/2AG/62Q) ASSY (S)			●
3	1-763-923-11	FAN, DC (WITH HEAT SYNC)	●	●	●
4	6-600-084-01	DDR 512MB (HYS64D64020GU-7-A)	●	●	
	6-600-201-01	DDR 512MB (MT16VDDT6464AG-335C4)			●
5	7-300-000-40	SILICON COMPOUND (G-765)90G	●	●	●
11	A-8110-895-A	HDD (S-U6/ST360020S/60G) ASSY (S)	●		
	A-8112-130-A	HDD (SA-V60/SV0602H/60GB) ASSY (S)		●	
	A-8112-155-A	HDD (SA-V60/SV0813H/80GB) ASSY (S)			●
12	X-4625-259-1	ASS'Y, BRACKET HDD	●		
	X-4625-259-2	ASS'Y, BRACKET HDD		●	●
13	1-796-475-11	CD-RW/DVD-ROM(K-730)	●	●	
	1-796-729-11	CD-RW/DVD-ROM(PC-750)			●
14	X-4624-457-1	ESCUTCHEON (9M) ASS'Y	●	●	●
15	X-4625-000-1	CHASSIS ASSY, DRIVE	●	●	
	X-4625-000-2	CHASSIS ASSY, DRIVE			●
21	1-477-152-11	AMPLIFIER UNIT, AUDIO	●	●	●
22	1-477-193-13	INVERTER UNIT	●		
	1-477-193-31	INVERTER UNIT		●	●
24	1-761-529-31	CARD, MODEM	●	●	
	1-761-672-22	CNR(ASKEY) MODEM			●
25	1-761-531-11	LED/SW BOARD	●		
	1-761-531-12	LED/SW BOARD		●	●
26	1-761-532-11	SLIM IDE BOARD	●		
	1-761-532-12	SLIM IDE BOARD		●	●
28	1-761-535-11	CARD, PCI RISER	●		
	1-761-535-12	CARD, PCI RISER		●	●
29	1-761-537-21	BOARD, PCMCIA	●		
	1-761-537-22	BOARD, PCMCIA		●	●
30	A-8067-447-B	MOUNTED PWB, ANL-29	●	●	●
△ 41	1-468-716-21	POWER, SWITCHING	●		
	1-468-716-22	POWER, SWITCHING		●	●
51	1-823-782-21	CABLE, FLEXIBLE FLAT (LED)	●	●	●
52	1-823-784-13	CABLE, FLEXIBLE FLAT (MS)	●	●	●
53	1-824-682-11	CABLE, POWER EXTENSION	●	●	●
55	1-961-626-12	HARNESS (AUDIO)	●	●	●
56	1-961-627-11	HARNESS (INVERTER)	●	●	●
57	1-961-644-11	HARNESS (IDE HDD)	●	●	●
58	1-961-645-11	HARNESS (IDE CD/DVD)	●	●	●
59	1-961-845-21	HARNESS (LCD)	●		
	1-961-845-22	HARNESS (LCD)		●	●

Ref.No.	Part No.	Description	W10	W20	W30
71	1-477-527-11	KEY BOARD UNIT (US)	●		
	1-477-527-12	KEY BOARD UNIT (US)		●	●
72	1-825-047-13	SPEAKER UNIT	●	●	●
73	1-543-793-11	FILTER, CLAMP (FERRITE CORE)	●	●	
74	4-640-554-21	CABLE CLAMP	●	●	●
75	4-649-870-11	LABEL (ETHER), CAUTION	●	●	●
76	4-656-043-01	FINGER, DRIVE	●	●	●
77	4-660-100-02	COVER (FRONT), HINGE	●	●	●
78	4-660-102-01	COVER, CABLE	●	●	●
79	4-660-109-01	PANEL, ACRYLIC	●		
	4-660-109-02	PANEL, ACRYLIC		●	●
80	4-660-126-01	CUSHION, SPEAKER	●	●	●
81	X-4624-795-1	HINGE, KEY BOARD	●	●	●
82	4-660-698-02	COVER (REAR), HINGE	●	●	●
83	4-660-763-03	SUPPORT, RISER	●	●	●
84	4-660-767-01	BRACKET, HINGE	●	●	●
85	4-660-769-02	PANEL, BLANK	●	●	●
86	4-660-770-01	BRACKET, PC CARD	●	●	●
87	4-660-771-01	BRACKET, TUNER	●	●	
88	4-660-772-02	BRACKET, MODEM	●	●	
	4-670-613-02	BRACKET, MODEM			●
89	4-660-774-03	COVER, MEMORY	●	●	●
90	4-666-846-01	COVER, STAND	●	●	●
92	4-660-785-01	BRACKET, STAND	●		
	X-4625-840-1	ASS'Y, STANDBRACKET		●	●
# 93	4-661-371-01	FOOT	●	●	●
94	4-661-383-01	COVER, SCREW	●	●	●
95	4-662-263-01	CUSHION (REAR), SPEAKER	●	●	●
96	4-662-505-01	COVER, INVERTOR	●	●	●
97	4-662-575-01	MOTHERBOARD SHIELD B	●		
	4-662-575-02	MOTHERBOARD SHIELD B		●	●
98	4-662-576-04	MOTHERBOARD SHIELD A	●		
	X-4625-809-1	SHIELD ASS'Y, MB		●	●
99	4-662-577-03	SHIELD (A), BOTTOM	●	●	●
101	4-662-608-02	SUPPORT (A), MAIN CHASSIS	●	●	●
102	4-662-609-01	SUPPORT (B), MAIN CHASSIS	●		
103	4-662-796-01	CLIP, COACHING	●	●	●
104	4-663-062-01	PACKING (VT)	●		
	4-663-062-02	PACKING (VT)		●	●
105	4-663-063-01	PACKING (HR)	●		
	4-663-063-02	PACKING (HR)		●	●
106	4-663-064-01	SHIELD, ANL-29	●	●	●
107	4-663-080-01	SPACER, HINGE	●	●	●
108	4-663-104-01	TAPE, NICKEL CLOTH	●	●	●
110	4-663-105-11	TAPE, COPPER LEAF			●
111	4-663-105-21	TAPE, COPPER LEAF			●
112	4-663-105-31	TAPE, COPPER LEAF	●	●	●
116	4-663-151-01	TAPE (25X40), GLASS	●	●	●
121	4-663-155-11	GASKET 5X5	●	●	●
122	4-663-156-01	TAPE (TOP-BOTTOM), NI CLOTH	●	●	●

Ref.No.	Part No.	Description	W10	W20	W30
127	4-670-619-02	SPACER, BACK PLATE		●	●
128	4-665-788-01	SPACER, RISER	●	●	●
129	4-665-811-01	SHIELD, PITCH	●	●	●
132	4-669-770-01	GASKET 3X9	●	●	●
133	4-669-791-01	GASKET (6X6)	●	●	●
134	4-669-791-11	GASKET (6X6)	●	●	●
135	4-670-032-01	FINGER, BOTTOM	●	●	●
136	4-670-057-01	TAPE (25X80), GLASS	●	●	●
137	4-670-160-01	TAPE, NI CLOTH	●	●	●
138	A-8059-465-E	PANEL ASSY (WH), FRONT	●		
	A-8059-465-F	PANEL ASSY (WH), FRONT		●	
	A-8115-056-A	PANEL ASSY, FRONT (USW)			●
139	A-8111-955-A	STAND ASSY	●		
	A-8111-955-B	STAND ASSY		●	
	A-8111-955-C	STAND ASSY			●
140	A-8059-675-A	LCD (NE/15.3/WXGA) ASSY (S)	●		
	A-8113-316-A	LCD (SA/15.3/WXGA) ASSY (S)		●	●
141	X-4624-458-4	CHASSIS ASSY, LCD	●	●	●
142	X-4624-506-1	NET ASS'Y, SPEAKER	●	●	●
143	X-4625-124-2	REAR COVER ASSY	●	●	●
145	X-4625-202-1	CHASSIS ASSY, CENTER	●	●	●
146	X-4625-203-1	CHASSIS ASSY, IO	●	●	●
147	X-4625-205-1	PANEL ASSY (US), IO	●	●	●
150	X-4624-774-1	SUPPORT (B) ASSY, MAIN CHASSIS	●	●	●
151	4-663-104-21	TAPE, NICKEL CLOTH	●	●	●
162	4-670-894-02	DUCT, CPU	●	●	●
165	4-669-769-01	LABEL (MR-003)	●		
166	4-663-156-11	TAPE (TOP-BOTTOM), NI CLOTH	●	●	●
167	4-666-149-01	TAPE, CONDUCTIVE	●	●	●
168	4-666-149-11	TAPE, CONDUCTIVE	●	●	●
181	4-645-177-01	SCREW (M1.7X3.5)	●	●	●
182	4-645-944-01	SCREW (SW) (NO.6-32UNC)	●	●	●
183	7-621-773-95	SCREW +B 2.6X6	●	●	●
184	7-627-853-07	PRECISION SCREW +P 2X2 TYPE 3	●	●	●
185	7-682-547-09	SCREW +B 3X6	●	●	●
186	7-682-646-01	SCREW +PS 3X5	●	●	●
188	7-682-649-01	SCREW +PS 3X10	●		
189	7-682-947-01	SCREW +PSW 3X6	●	●	●
190	7-685-146-11	SCREW +P 3X8 TYPE2 NON-SLIT	●	●	●
191	4-665-466-01	SCREW (0 PART-NO.) (3 MAIN)	●	●	●

ACCESSORIES & PACKING MATERIALS					
Ref.No.	Part No.	Description	W10	W20	W30
△# 201	1-777-786-12	CORD, AC	●	●	●
# 203	1-796-510-11	MOUSE (USB)	●	●	●
# 204	1-783-801-32	CORD, CONNECTION	●	●	●
# 205	1-500-082-11	CLAMP, SLEEVE FERRITE	●	●	●
#	4-667-156-11	QUICK START/SAFETY INFORMATION	●		
	4-670-637-11	QUICK START/SAFETY INFORMATION		●	
	4-675-979-11	QUICK START			●

3-5. SUBSTITUTION LIST

If the repair part in the “Basic List” was not available, refer to order the ”Substitution List” if available.

Ref.No.	Part No.	Description	W10	W20	W30
2	A-8115-937-A	CPU (P4/2AG/SKV) ASSY (S)			●
4	6-600-083-01	DDR 512MB (MT16VDDT6464AG-265B1)		●	
	6-600-124-01	DDR 512MB (M368L6423DTL-CB0)		●	
	6-600-192-01	DDR 512MB (HYS64D64320GU-6-B)			●
	6-600-196-01	DDR 512MB (V826664K24SATG-C0)			●
11	A-8112-130-A	HDD (SA-V60/SV0602H/60GB) ASSY (S)	●		
	A-8112-131-A	HDD (M-FL/4R060*/60GB) ASSY (S)	●	●	
	A-8115-565-A	HDD (S-U9/ST380012A/80GB) ASSY (S)			●
13	1-796-730-11	CD-RW/DVD-ROM(T-2412)			●
14	X-4625-254-2	ASS'Y, ESCUTCHEON (TOSHI)			●


NOTE:

- The parts listed here are for service, and therefore they may be different from the parts shown in circuit diagrams or used in the set.
- # mark: The parts which can be sold.

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



List of PCV-W Series

Model	Service Manual Parts No.
PCV-W10 PCV-W20 PCV-W30 	9-874-354-03
PCV-W200M	9-874-378-01

 : Additional

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Revision History

Suffix	Ver.	Date	Contents	QM No.
-01	Ver. 1	2002.09.27	First Edition	—
-02	Ver. 2	2003.02.03	 Model Addition	FIT-D2003_018
-03	Ver. 3	2003.06.19	 Model Addition	FIT-D2003_075
<div><Remarks></div>				